

*CDJ/TM*

four pyrrole moieties is fused to a single carbocyclic ring to form a phthalocyanine subunit, (ii) each of the other three pyrrole moieties is fused to between zero and three carbocyclic rings to form a subunit selected from the group consisting of an azaporphine subunit, a phthalocyanine subunit, a naphthalocyanine subunit and an anthranyloxyaniline subunit, and (iii) at least two of the four pyrrole moieties comprise a different number of carbocyclic rings fused thereto;

- b. generating a detectable signal from ligand analogue conjugate that is not bound to said ligand receptor in said reaction mixture; and[.]
- c. relating the detectable signal to the presence or amount of said target ligand in said fluid sample.

#### **REMARKS**

The invention relates in part to assay methods that utilize water soluble hybrid phthalocyanine derivatives as fluorescent labels. The water soluble hybrid phthalocyanine derivatives of the instant invention have advantageously large stokes shifts and intensities, and are useful as labels, for example in assays for determining the presence or amount of an analyte in aqueous samples.

Claims 23-35 are presently pending in the instant application, and claims 28, 30, 32, and 34 are under consideration by the Examiner. Applicant has amended claims 28 and 30 herein. The amended claims are fully supported by the specification and do not introduce new matter or require a new search. Specifically, the amended claims simply clarify the claimed subject matter using preferred terminology, and are commensurate in scope to the previously pending claims.

Additionally, support for hybrid phthalocyanines in which at least two subunits comprise different numbers of aromatic rings fused to the pyrrole moiety, and in which each pyrrole moiety is fused to from zero to three aromatic rings can be found in the specification, *e.g.*, on page 22, lines 9-25; page 31, line 31, through page 33, line 16; table 2 beginning on page 85, and figure 9; and for hybrid phthalocyanines in which at least one subunit is a pyrrole moiety fused to a single aromatic ring, *e.g.*, examples 11-13 in table 2, and figure 9.

Notwithstanding the foregoing, Applicant expressly reserves the right to pursue subject matter no longer claimed in the instant application in one or more applications which may claim priority hereto. Applicant respectfully requests reconsideration of the claimed invention in view of the foregoing amendments and the following remarks.

*Art-Related Remarks*

35 U.S.C. § 103

The Examiner has rejected claims 30 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Renzoni *et al.*, U.S. Patent No. 5,627,028, in view of Freytag, U.S. Patent No. 4,434,236. The Examiner has also rejected claims 28 and 32 as being unpatentable over Renzoni *et al.* in view of Freytag, and in further view of Stanton *et al.*, U.S. Patent No. 4,803,170. Applicants respectfully traverse these rejections.

To establish a prima facie case of obviousness, three criteria must be met: there must be some motivation or suggestion, either in the cited references or in knowledge available to one skilled in the art, to modify or combine the cited references; there must be a reasonable expectation of success in combining the references to achieve the claimed invention; and the references must teach or suggest all of the claim limitations. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143.

The instantly claimed methods refer to “hybrid phthalocyanine derivatives,” which the ordinarily skilled artisan will understand from the specification are tetraazapyrrole molecules in which at least two of the pyrrole moieties are fused to different numbers of aromatic rings. *See, e.g.*, specification, page 22, lines 9-25; page 31, line 31, through page 33, line 16; table 2 beginning on page 85, and figure 9. Moreover, Applicant has amended the claims herein in order to clarify what is meant by the term “hybrid phthalocyanine derivatives.”

In contrast, the Renzoni *et al.* reference does not disclose or suggest any hybrid phthalocyanine derivatives. Instead, the Renzoni *et al.* reference only discloses phthalocyanine molecules in which each pyrrole moiety is fused to a single aromatic ring. *See, e.g.*, Renzoni *et al.*, abstract; Figure 1; column 3, lines 34-51. Moreover, neither the Freytag reference, nor the

Stanton *et al.* reference, discloses or suggests any phthalocyanine molecules whatsoever, nor does the Examiner contend that either reference does so. Instead, these secondary references are cited merely as describing assay methods generally. Thus, the secondary references do not overcome the deficiencies of the primary reference.

Accordingly, because the references cited by the Examiner, alone or in combination, fail to disclose or suggest the hybrid phthalocyanine derivatives of the claimed methods, no *prima facie* case of obviousness has been established. Therefore, Applicant respectfully requests that the Examiner withdraw the rejection.

### CONCLUSION

In view of the foregoing remarks, Applicant respectfully submits that the pending claims are in condition for allowance. An early notice to that effect is earnestly solicited. Should any matters remain outstanding, the Examiner is encouraged to contact the undersigned at the address and telephone number listed below so that they may be resolved without the need for additional action and response thereto.

Respectfully submitted,  
Brobeck, Phleger & Harrison LLP

Dated: 6/1/00

By:   
For Richard J. Warburg,  
Michael A. Whittaker  
Registration No. 46,230

12390 El Camino Real  
San Diego, CA 92130  
Telephone: (858) 720-2500